

CLAIMS

1. An apparatus comprising:
  - a base capable of receiving a camera including a lens; and
  - a projector coupled to the base and adapted to project a plurality of beams of light onto a plane positioned at a focus distance from the base, wherein the projections of the beams of light on the plane are geometric shapes, and wherein an intersection of the geometric shapes is at the center of the field of view of the lens when the lens is installed on the base.
2. The apparatus of claim 1 wherein the geometric shapes are bars, and the intersection of the bars is at the center of the field of view of the lens independent of the distance between the lens and the plane.
3. The apparatus of claim 2 wherein the plurality of bars comprises two bars, including a first bar and a second bar.
4. The apparatus of claim 3 wherein a shape created by the intersection of the first and second bars varies according to the focus distance.
5. The apparatus of claim 4 wherein each of the first and second bars have first and second ends, and wherein
  - if the first and second bars intersect at or near both their first ends, substantially forming a caret shape, the camera is at a first focus distance;
  - if the first and second bars bisect each other, the camera is at a second focus distance; and
  - if the first and second bars intersect each other at or near both their second ends, substantially forming a V shape, the camera is at a third focus distance.

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6. The apparatus of claim 1 wherein the projector comprises first and second projectors, each comprising:
    - a light source;
    - a beam former positioned between the light source and the plane for forming the beam emitted from the light source; and
    - a lens for focusing the light beam emitted from the beam former.
  7. The apparatus of claim 1, further comprising a camera including a lens.
  8. The apparatus of claim 1, further comprising:
    - an image processor for processing an image captured by the camera; and
    - a confirmation projector coupled to the image processor, wherein the projector projects a confirmation beam onto the plane when the image processor signals to the confirmation projector that it has processed the image.
  9. The apparatus of claim 8 wherein the confirmation beam flashes instantaneously onto the plane.
  10. A process comprising:
    - projecting a first light beam onto a plane, wherein the projection of the first light beam on the plane is a first geometric shape ;
    - projecting a second light beam onto the plane, wherein the projection of the second light beam on the plane is a second geometric shape; and
    - aligning the first and second beams such that an intersection of the first and second geometric shapes is at the center of the field of view of a lens of a camera, independently of the distance between the lens and the plane.

11. The process of claim 10 wherein the first and second geometric shapes are bars, and wherein a shape created by the intersection of the first and second bars varies according to the focus distance.

12. The process of claim 11 wherein each of the first and second bars have first and second ends, and wherein

if the first and second bars intersect at or near both their first ends, substantially forming a caret shape, the lens is at a first focus distance from the plane;

if the first and second bars bisect each other, the lens is at a second focus distance from the plane; and

if the first and second bars intersect each other at or near both their second ends, substantially forming a V shape, the lens is at a third focus distance from the plane.

13. The process of claim 10 wherein projecting the beam comprises:

emitting light from a light source;

forming the beam emitted from the light source using a beam former positioned between the light source and the plane; and

focusing the light beam emitted from the beam former.

14. The process of claim 10, further comprising:

capturing an image using the camera;

processing the image captured by the camera using an image processor; and

projecting a confirmation beam onto the plane when the image processor signals to the confirmation projector that it has processed the image.

15. An apparatus comprising:
- a base capable of receiving a camera including a lens;
  - an image processor capable of being coupled to the camera for processing an image of a target captured by the camera; and
  - a confirmation projector coupled to the image processor, wherein the projector projects a confirmation beam onto the plane of the target when the image processor signals the confirmation projector that it has processed the image.
16. The apparatus of claim 15 wherein the confirmation projector comprises:
- a light source; and
  - a lens for focusing the light emitted from the light source.
17. The apparatus of claim 15 wherein the confirmation beam flashes instantaneously onto the plane.
18. The apparatus of claim 15, further comprising a projector coupled to the camera and adapted to project a plurality of beams of light onto a plane positioned at a focus distance from the lens, wherein the projections of the beams of light on the plane are in the shape of bars, and wherein an intersection of the bars is at the center of the field of view of the lens when installed on the base.
19. The apparatus of claim 15, further comprising a camera including a lens.
20. A process comprising:
- capturing an image of a target on a plane using a camera;
  - processing the image captured by the camera using an image processor; and

projecting a confirmation beam onto the plane when the image processor signals to the confirmation projector that it has processed the image.

21. The process of claim 20 wherein projecting the confirmation beam comprises:

emitting light from a light source;

focusing or collimating the light beam emitted from the light source onto the plane.

22. The process of claim 20, further comprising:

projecting a first light beam onto a plane, wherein the projection of the first light beam on the plane is in the shape of a first bar;

projecting a second light beam onto the plane, wherein the projection of the second light beam on the plane is in the shape of a second bar; and

aligning the first and second beams such that an intersection of the bars is at the center of the field of view of a lens of a camera, independently of the distance between the lens and the plane.

23. An apparatus comprising:

a base capable of receiving an image processor and a camera including a lens;

a projector coupled to the base and adapted to project a plurality of beams of light onto a plane positioned at a focus distance from the lens, wherein the projections of the beams of light on the plane are geometric shapes, and wherein an intersection of the geometric shapes is at the center of the field of view of the lens when installed on the base; and

- a confirmation projector coupled to the image processor, wherein the projector projects a confirmation beam onto the plane when the image processor signals the confirmation projector that it has processed the image.
24. The apparatus of claim 23 wherein the geometric shapes comprise two bars, including a first bar and a second bar.
25. The apparatus of claim 24 wherein the relative positions of the intersection of the first and second bars varies according to the focus distance.
26. The apparatus of claim 25 wherein each of the first and second bars have first and second ends, and wherein
- if the first and second bars intersect at or near both their first ends, substantially forming a caret shape, the camera is at a first focus distance;
- if the first and second bars bisect each other, the camera is at a second focus distance; and
- if the first and second bars intersect each other at or near both their second ends, substantially forming a V shape, the camera is at a third focus distance.
27. The apparatus of claim 23 wherein the projector comprises first and second projectors, each comprising:
- a light source;
- a beam former positioned between the light source and the plane for forming the beam emitted from the light source; and
- a lens for focusing the light beam emitted from the beam former.
28. The apparatus of claim 23 wherein the confirmation projector comprises:
- a light source; and
- a lens for focusing the light emitted from the light source.

29. The apparatus of claim 23 wherein the confirmation beam flashes instantaneously onto the plane.